

IN THE SPECIFICATION:

After the Title of the Invention and before the heading "[Technical Field], insert the following new heading and paragraph:

Cross-Reference to Related Applications

This application is a U.S. national stage application of copending International Application No. PCT/JP2005/002537, filed February 18, 2005, claiming a priority date of February 25, 2004, and published in a non-English language.

Before paragraph [0001] on page 1, amend the heading as follows:

~~[Technical Field]~~ Technical Field

Before paragraph [0002] on page 1, amend the heading as

follows:

~~[Background Art]~~ Background Art

Please amend paragraph [0002] as follows:

While a sample is observed by an SEM apparatus that includes a conductive probe in a system, when the probe touches a local area of a sample, a phenomenon in which that area shown on a display brightens or, to the contrary, darkens

is observed. This phenomenon is called a potential contrast.

On the left in Fig. 8, the case is shown where a sample surface on which a wiring R is exposed is observed by an SEM, the wiring R portion is displayed brightly in the SEM image. Also, in this phenomenon, when a conductive probe P comes into contact with a wiring B portion which has been displayed brightly, the contacted portion of the wiring R darkens as shown on the right in Fig. 8. This means that a sample surface is irradiated ~~on~~ in the SEM observation with a negatively charged electrons and, in the state in which the wiring B portion is charged by the electrons, the conductive probe P comes into contact with the wiring B portion and discharges the charge, whereby the potential of that portion changes. When an electron beam is used for scanning in, for example, a raster order on a sample surface, since a secondary ~~electron~~ electrons ~~is~~ are emitted due to the properties of the irradiated portion, the image of the SEM is obtained by detecting ~~this~~ the secondary ~~electron~~ electrons and associating the secondary ~~electron~~ electrons with the irradiated position to display the sample image two-dimensionally. In the case where a certain area of the sample is positively charged as shown in the upper half of Fig. 9, since a secondary electron emitted following irradiation by an electron beam has a negative charge, the secondary electron is attracted by this area and comes into a state in which it is

difficult for the secondary electron to reach a secondary electron detector (SED) and is not detected easily. Therefore, an image in that portion darkens. On the other hand, in the case where a certain area of a sample is negatively charged as shown in the lower half of Fig. 9, a repulsion caused by the charging of this area repels secondary electrons emitted after irradiation by an electron beam, and the electron beam is easily pushed out toward and detected by the secondary electron detector. Therefore, the image in that portion brightens. A non-patent reference 1 discloses a technique for inspecting continuity of wiring and presence or absence of a defect according to a change in a voltage contrast (VC), which is caused in the wiring by bringing a conductive probe into contact with a semiconductor device, utilizing this phenomenon.

Before paragraph [0004] amend the heading as follows:

~~[Problems that the Invention is to solve]~~ Summary of the Invention

Please amend paragraph [0004] as follows:

The One problem that the invention is to solve requires proposal of an inspection method that makes it possible to inspect the continuity or the like of a circuit element in a semiconductor device from observation with a

scanning charged particle microgun such as an electron microgun without troublesome work like random access operation of a probe, and providing a system that realizes the inspection method.

Before paragraph [0005] delete the heading in its entirety:

~~{Means for solving the Problems}~~

Before paragraph [0007] delete the heading in its entirety:

~~{Advantages of the Invention}~~

Please amend paragraph [0008] as follows:

In addition, in the semiconductor inspection method of the invention, a sample is irradiated by an electron beam ~~on~~ to negatively charge the sample and the sample is observed with an SEM, the sample is spot-irradiated with a positively charged ion beam and reversal of contrast is observed with an SEM, wherein the acceleration voltage of the ion beam for spot-irradiation is set at a low acceleration of 10 kV or less. Thus, it is possible to prevent harmful contamination of a sample surface due to sputter etching and residual ions.

Before paragraph [0012] amend the heading as follows:

~~{Brief Description of the Drawings}~~ Brief Description of the Drawings

Before paragraph [0013] amend the heading as follows:

~~{Description of Reference Numerals and Signs}~~ Description of
Reference Numerals and Signs

Delete paragraph [0013] in its entirety.

Before paragraph [0014] amend the head as follows:

~~{Best Mode for carrying out the Invention}~~ Detailed
Description of the Invention

Paragraph beginning at line 6 of page 11 has been amended as follows:

When the SEM gun executes electron beam scanning for microscopic operation in response to a scanning instruction from the computer 5, a secondary electrons are emitted from the point ~~the~~ irradiated by the electron beam, ~~1-irradiated,~~ the secondary electron detector 4 detects the secondary ~~electron~~ electrons, and the secondary electron detector 4 stores the detected value of the secondary electrons in the computer 5 together with position data. When data of a scanning area is stored and accumulated, the computer 5 outputs the data to the display 6 as image information, and the display 6 displays the sample image at that point.

Paragraph beginning at line 17 of page 11 has been amended as follows:

When the operator determines a target point which the operator desires to inspect from the sample image and designates the position of that target point on the display using an input unit 7 such as a mouse, the computer 5 sends position information of the target point to the FIB gun that has the charge for neutralizing the initial charging. The FIB gun which has received this position signal adjusts a deflector so that the beam is set at the target point and emits an ion beam at a designated acceleration voltage to inject ~~an ion~~ ions.

Please amend paragraph [0025] as follows:

In Fig. 6 is shown an embodiment where a disconnection inspection can be performed easily with the inspection method of the invention. Shown here is an example in which it is confirmed whether a highly charged wiring portion and an element are connected with each other. As shown in A in Fig. 6, in the case that there is an area with a highly charged wiring portion and an element in a scanning area on the sample surface, to confirm whether the wiring and the element are connected with each other, the area in

question is irradiated with a neutralizing beam and it is observed whether the element and the wiring area show the same contrast change. The area in question is irradiated with the FIB as shown in B in ~~the figure~~ Fig. 6 and, if contrast changes in the element in the same manner as the wiring, it is judged that the wiring and the element are connected with each other.

If there is no change of contrast in the element as shown in C in Fig. 6, the wiring area and the element area are disconnected.

Before paragraph [0027] delete the heading its entirety:

~~{Industrial Applicability}~~